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Orchid Culture

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THE cultivation of Orchids is a very fascinating avocation for the amateur who delights in growing plants under glass.

For several years it has been my good fortune to visit many of the larger Orchid exhibitions in this country and frequently I have heard the remark made, How beautiful they are! I would love to grow them. I am however informed that the plants are so fickle in their requirements and they need very special attention regarding their culture, and if this is not given they will pine away and die. I am also informed that special houses must be erected for their culture, and these houses maintained at a high temperature at all times. How grossly misleading these statements are.

I would like to assure any amateur who is interested in these beautiful plants, that it is not necessary to erect special houses in which to grow them. Regarding temperature they do not require great heat.

As a practical grower with many years' experience, I am fully convinced that too much fire heat is one of the chief causes of failure with the plants. Orchids can be grown in any greenhouse if a little study is given to the cultural details.

It was that estimable gentleman and great rosarian Dean Hole who in *A Book About Roses* states "He who would have beautiful roses in his garden must have beautiful roses *in his heart.*" Let me paraphrase his philosophy thus: He who would have beautiful Orchids in his greenhouse must have beautiful Orchids *in his heart.* He must love them well and always, in flower and out of flower. This

I think is the keynote of success with Orchids.

Public sentiment has given its stamp of approval to the Orchid and it is heralded as one of the most beautiful creations in the kingdom of Flora. Aside from its appeal as a thing of beauty it has much to commend it as a most useful flower.

For table and all other decorations where choice flowers are desired, for bouquets and as a subject for "My Lady's corsage" it is without a peer. Then again its good keeping quality appeals to all flower lovers. On these attributes as well as on its intrinsic beauty the stamp of public approval is set.

In surveying the horticultural field during the last few decades I can find no record of a family of plants which has made such rapid strides regarding cultivation, or one that has attained more rapid popularity than the Orchid. So numerous are the species and varieties of Orchids in cultivation today, it can be said of them they are legion. New discoveries are constantly being made and the list of new plants the result of hybridists' skill has assumed mammoth proportions.

The methods adopted by the pioneers to cultivate Orchids were not satisfactory due in a large measure to the lack of knowledge regarding their ecology. Indeed tens of thousands of plants were imported only to eke out an existence for a few years and then to succumb. This was not to be wondered at, owing at that time to the lack of knowledge regarding their simple requirements. In many cases the natural conditions of the plants and their acclimatization

to captivity were entirely ignored.

Experience has shown me that Orchids may be cultivated with great success if a few simple rules are followed which I will endeavor to explain.

Potting.

Orchids in common with other plants should be potted at least every two years. In most cases an annual potting would be best. It is very important for the successful growing of Orchids that the potting should not be neglected. But alas one often finds the Orchids more neglected regarding potting than any other plants grown under glass. This method of culture or rather non-culture courts failure and leads to disappointment.

The lack of knowledge regarding potting the plants and the proper compost to use is chiefly confined to the amateur just starting in the field of orchidology. In European countries fibrous loam, peat, sphagnum moss, leaves and osmunda fibre enter into their potting compost. These materials or a combination of them have not been the most successful in our country. In fact it is advantageous in the case of imported plants growing in this material to repot them when the period of time for that operation is at hand.

The plants should be potted in a good quality Osmundine (osmunda fibre). There are several grades of Osmundine. Avoid using the coarse black fibre material as, owing to its coarse texture, it allows the plants to dry out too rapidly. Select the brown colored upland material taken from a section which has not been burned over. The burning over destroys its value as a potting medium for orchids. Osmunda fibre taken from swampy

land should not be used as usually this material possesses a strong acid reaction approaching sourness which is detrimental to the plants. The composition and condition of the material used as potting material is of vital importance. We must remember that plants growing in captivity have not the same opportunities as that endowed them by nature. Whether the plants are grown in pots, baskets or other containers the roots in such cases are confined to the meagre amount of material which is placed around them. A grower who treats all his plants alike regarding potting compost, etc., will never receive from these plants the results as will a grower who is a thoughtful and observant student.

The roots of Orchids are firm and brittle and they will not allow of much bending as is the case with other plants. Considerable damage may be done them by forcing them to grow in a cramped position. It is bad practice to leave the plants in the pots for several years without repotting them, also the old potting material after constant waterings becomes sour and it is detrimental to the health of the plant. When is the proper time to repot an Orchid? is a question frequently asked by the beginner. No definite date to this question can be given except that every plant must be taken in hand separately and treated according to its requirements. When the new lead commences to show signs of growth new roots appear simultaneously at its base, this is the most favorable time to pot the plant. When taking out the plants from their receptacles to repot them carefully remove all old potting material and with the aid of a pair of pruning shears cut away all spent and decaying pseudo bulbs and obsolete growth.

Receptacles.

Baskets, rafts, blocks and flower pots of various designs are used in which to grow Orchids. The tendency of late years however is to use flower pots very largely. Most species make more satisfactory growth when grown in flower pots. In preparing the osmundine for potting, break up the portions into sizes suitable for the receptacles used. The size will vary from that of a hen's egg to a size much smaller. All small particles and dust should be screened out of the compost before using. Many growers prefer to use charcoal and a small quantity of live sphagnum moss with the osmundine. Both these ingredients are of value in the compost.

Plants that do not require potting should be top-dressed with good osmunda fibre.

Before the flower pots are used they should be thoroughly cleansed, both inside and out, and it is also advisable to wash the crocks which are used as drainage. Cleanliness should be practiced in the Orchid house to insure the best results.

Shading.

With plants growing under glass, light will counteract a deficiency in air in the same way that a good supply of air will often mitigate bad lighting conditions. Bear in mind, however, few Orchids grown under glass will stand exposure to the burning influence of the sun's rays. Light therefore must be controlled, as far as possible, in order that the plants may obtain their maximum allowance without burning.

The method of placing a heavy shading on the outside or inside the Orchid house is to be condemned as it is the antithesis of good Orchid management. The most practical and

efficient method of shading is the *Lath Roller Shade* which is manufactured for any type of greenhouse. This method of shading insures the maximum amount of light in the greenhouse, a factor of importance in the good health of the plants. From a practical standpoint this factor is of immense importance. Lath shades also at the same time cater to our aesthetic feelings. The lath roller shades have another function which I have not mentioned. It is that of protection for the plants during the cold winter nights when they may be lowered during the later afternoon and raised the following morning.

If any of the various whiting or paint shadings are to be used on the glass they should be applied lightly in early spring, increasing the shade towards mid-summer and decreasing by partial removal of the material in the fall. In shading let us understand that its function is to break the direct rays of the sun, and diffuse, not to obscure them as is done in a great many cases.

Watering.

Many Orchids rest naturally during the winter months, and do not require the heat and moisture necessary when the plant is in full growth. It is surprising what an amount of cold some plants will stand when in a dry state. A sudden change from growing conditions to a drier and colder atmosphere is not advisable; all plants should be gradually hardened off and the foliage properly matured before they are placed in any decided change of atmosphere.

Species and hybrids vary so much that no definite date can be given for the commencement or ending of the resting season; every plant must be treated entirely according to its own wants. While some may only

require watering once a week others will want attention every day, so much depends on root activity and the kind of compost used. Only sufficient water should be given to prevent the pseudo-bulbs from shrivelling, any excess is likely to cause the plants to commence a new growth at a most unfavorable time of the year.

Temperature.

As regards temperature, a number of the Orchids in nature grow at a high altitude and while during the day they are subject to the direct heat of the sun during the summer solstice, yet it is not unusual during the winter solstice during the colder periods to find some of them covered with hoarfrost. The respective degrees of warmth found most conducive to the health of the plants are as follows:

Cattleya House:

Summer—	60°-65° night
	65°-70° day
Winter—	55°-60° night
	60°-65° day

These temperatures may be raised 10°-15° by solar heat.

Cool House.

The temperature should be kept as near 60° as possible by day and 55° by night during summer.

In winter the night temperature may fall to 45°-50° without injury to the plants, but should be increased several degrees by day.

Ventilation.

Plants should receive the optimum amount of heat and light from the sun at all times, compatible to their safety during the several months of the year. Air in the greenhouses bottled up becomes superheated, and the plants will not thrive in a stuffy atmosphere. On all days during mild

weather air should be administered from the top ventilators. During the early spring, fall and winter months the top and bottom ventilators should not be opened at the same time, as this is likely to create a draught which is very injurious to the plants.

Plants recently potted should receive a little more shade than those fully established. A plant that is well established quickly replaces the moisture that is transpired from the leaves and light and air on the plant acting as an incentive to root action, as more call is made on the roots for moisture.

Repotting for a time afterwards disorganizes the balance between the foliage and roots. The roots being unable for a time to normally function.

At this period therefore, instead of giving the plant the light and air which it would in a normal condition enjoy, less air and more shade will be necessary for a time and to check transpiration the plant should be more frequently sprayed and great care must be exercised when watering at the root until the re-establishing period is over.

Insect Pests.

Thrips are one of the arch enemies of Orchids; the damage by these insects is often done before their presence is detected. Systematic spraying with an insecticide is the safest and surest means to keep the plants clean and healthy. Occasional fumigations are necessary if the plants are badly infested. Avoid heavy fumigations. Give light fumigations more frequently if thrips are noticed on the plants. The plants do not like fumigations and should not be subjected to them only of necessity. Plants should not be subjected to fumigation more often than once a month.